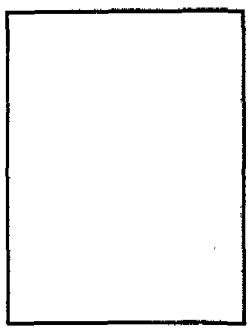
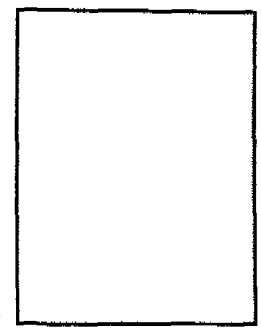


ADVOCACY 95%
RESEARCH 5%

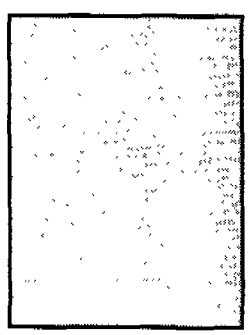
CHAIRMAN: Roger Tankersley, Hoechst Celanese Corporation. **CHARTERED:** 1991. **TASK GROUP:** Toxicology. **PANEL MANAGER:** Kathleen Roberts. **MISSION:** To address the regulatory concerns of manufacturers, processers, and users of acetone. **GREATEST ACCOMPLISHMENT:** Successfully advocated OSHA PEL of 750 ppm. **LATEST ACCOMPLISHMENT:** Completed and submitted petitions to reclassify acetone as a volatile organic compound of negligible reactivity and to delist from SARA 313. **MOST PRESSING ISSUE:** To proceed with neurotoxicity testing program outlined in a recent consent order. **DETAILS:** Page .

RESEARCH 65%
EDUCATION 35%

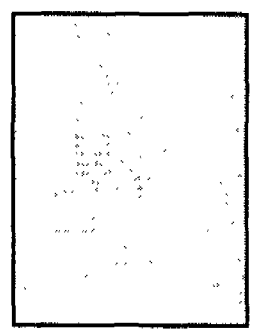


CHAIRMAN: Connie E. Carroll, Union Carbide Corporation. **CHARTERED:** 1987. **TASK GROUP:** Toxicology Research. **PANEL MANAGER:** Fernando Leiva. **MISSION:** To determine the health and environmental effects of alkylphenols and ethoxylates in manufacture and use. **GREATEST ACCOMPLISHMENT:** Completed all testing required under TSCA Section 4 for nonylphenol. **LATEST ACCOMPLISHMENT:** Held a facilitated planning session in which communication and research needs were identified as further priorities. **MOST PRESSING ISSUE:** To initiate a risk assessment of alkylphenols and ethoxylates. **DETAILS:** Page.

ADVOCACY 50%
RESEARCH 50%



CHAIRMAN: Ray Papciak, Texaco Chemical Company. **CHARTERED:** 1982. **TASK GROUP:** Toxicology Research. **PANEL MANAGER:** Jonathon Busch. **MISSION:** To address toxicology regulatory issues of alkanolamines. **GREATEST ACCOMPLISHMENT:** Completed voluntary research program relating to the dermal absorption, developmental toxicity, and pharmacokinetics studies of MEA and DEA. **LATEST ACCOMPLISHMENT:** Initiated a literature review covering the use, chemical and physical properties, toxicology and pharmacokinetics of alkanolamines. **MOST PRESSING ISSUE:** Advocating an increase in the Reportable Quantity for DEA with EPA. **DETAILS:** Page .

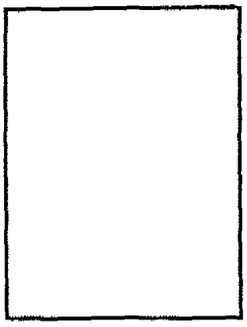


ADVOCACY 100%

CHAIRMAN: Roy Roseberry, FMC Corporation. **CHARTERED:** 1991. **TASK GROUP:** Toxicology Research. **PANEL MANAGER:** Kathleen Roberts. **MISSION:** To address TSCA Section 4 testing issues for aryl phosphates. **LATEST ACCOMPLISHMENT:** Proposed a testing program which was aceepted under EPA's "open season." **MOST PRESSING ISSUES:** To reach final agreement on TSCA testing program and begin testing. **DETAILS:** Page .

CMA 054542

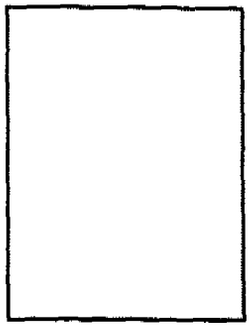
ADVOCACY 100%



CHAIRMAN: John Stewart, Courtaulds Fibers, Inc. **CHARTERED:** 1991. **TASK GROUP:** TSCA Testing. **PANEL MANAGER:** Elizabeth Moran. **MISSION:** Interact with regulatory agencies on safety, health, and environmental issues. **GREATEST ACCOMPLISHMENT:** Completed a review of the literature on CS_2 effects that will form the basis of the Panel's advocacy activities. **LATEST ACCOMPLISHMENT:** Convinced EPA to issue a stay of the effectiveness of listing H_2S on SARA 313. **MOST PRESSING ISSUE:** Appropriate setting of the reference concentration for Carbon Disulfide. **DETAILS:** Page .

[redacted]

ADVOCACY 20%
RESEARCH 70%
EDUCATION 10%



CHAIRMAN: Earl Smith, Vulcan Chemicals. **CHARTERED:** 1987. **TASK GROUPS:** Administration; Advocacy; Regulatory, Technical. **PANEL MANAGER:** Robert Romano. **MISSION:** To gather, review, generate and disseminate information on chlorine dioxide. **GREATEST ACCOMPLISHMENT:** Educated EPA test chlorine dioxide, sodium chlorite and sodium chlorate are safe and effective chemicals that should be used in the strategy of treating water in the United States. **LATEST ACCOMPLISHMENT:** Completed all Phase 1 requirements for EPA's FIFRA Data Call-In and FIFRA Phase IV Reregistration. **MOST PRESSING ISSUES:** Negotiating with EPA on Disinfectants and Disinfection By-Products Proposed Rule and the Enhanced Surface Water Treatment Requirements Proposed Rule. **DETAILS:** Page .

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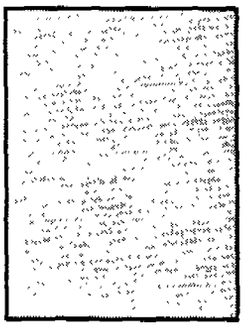
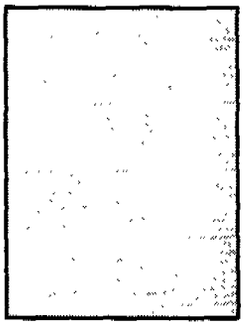
ADVOCACY 60%
RESEARCH 10%
EDUCATION 30%



CHAIRMAN: Bruce Jacobsen, Olin Corporation. **CHARTERED:** 1989. **TASK GROUPS:** Transportation; Research; DCCA Dihydrate Reclassification. **PANEL MANAGER:** Kathleen Roberts. **MISSION:** To promote safety practices in the processing, packaging, warehousing, transportation and use of chlorinated pool chemicals. **GREATEST ACCOMPLISHMENT:** Developed bulletins on safe handling, storage and transportation of CPCs, including a video for emergency response personnel. **LATEST ACCOMPLISHMENT:** Submitted a research report on chloroform releases from swimming pools to the California Air Resources Board. **MOST PRESSING ISSUE:** Work with DOT and the UN Expert Committee on the Transport of Dangerous Goods on the "self-reactive" classification of certain CPCs. **DETAILS:** Page .

RESEARCH 100%



CHAIRMAN: James Bryant, Standard Chlorine Chemical Co., Inc. **CHARTERED:** 1974. **TASK GROUPS:** Toxicology Research, FIFRA Data Call-In, 1, 2, 4-Trichlorobenzene. **PANEL MANAGER:** Carol Stack. **MISSION:** Voluntary and mandated research on health and environmental effects. **LATEST ACCOMPLISHMENT:** Completion of eight year TSCA Section 4 testing program. **MOST PRESS-**

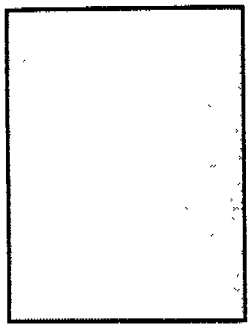
CMA 054543

Investigate the reclassification for certain CPCs.

Publication and Distribution of [redacted]

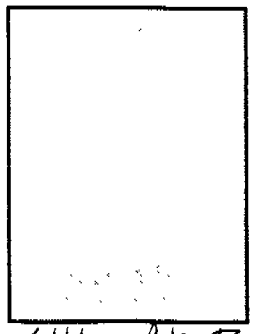
Consideration of [redacted] test protocols for certain CPCs in relation to NFPA classifications.

"Guideline for Safe Transportation of Calcium Hypochlorite and



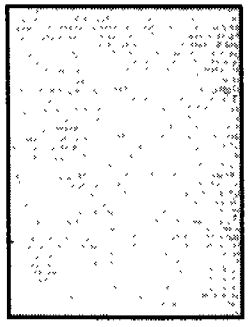
CHAIRMAN: Allan Kushins, Lonza, Inc. **CHARTERED:** 1992. **TASK GROUP:** None. **PANEL MANAGER:** Cecilia Spearing. **MISSION:** To complete a Screening Information Data Set (SIDS) dossier. **GREATEST ACCOMPLISHMENT:** Completion of SIDS dossier. **LATEST ACCOMPLISHMENT:** Working with EPA to ensure that all available data have been identified. **MOST PRESSING ISSUE:** Same. **DETAILS:** Page .

ADVOCACY 85%
RESEARCH 10%
COMMUNICATION 5%

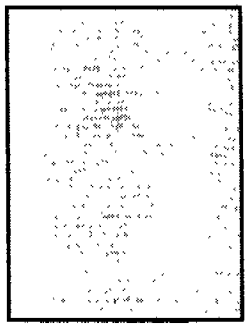


CHAIRMAN: William Snellings, Union Carbide Corporation. **CHARTERED:** 1986. **TASK GROUP:** Toxicology Research. **PANEL MANAGER:** ~~Kathryn Rosica.~~ Kathleen Roberts **MISSION:** To augment the database and address regulations affecting ethylene glycol. **GREATEST ACCOMPLISHMENT:** Advocated 5000 pound CERCLA RQ which EPA proposed in November 1993. **LATEST ACCOMPLISHMENT:** Initiated further research in determining mechanism of EG developmental toxicity. **MOST PRESSING ISSUE:** Responding to inclusion of EG on HAP TSCA list. **DETAILS:** Page .

ADVOCACY 100%

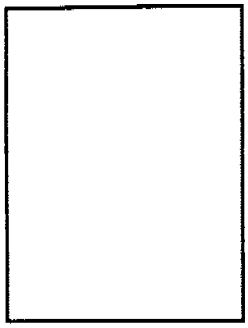


CHAIRMAN: Vacant. **CHARTERED:** 1974. **TASK GROUP:** None. **PANEL MANAGER:** Kathleen Roberts. **MISSION:** To address safety and health issues arising from the production, distribution, and use of EDC. **LATEST ACCOMPLISHMENT:** Submitted comments on draft ATSDR Toxicology Profile. **MOST PRESSING ISSUE:** Tracking regulatory issues affecting EDC. **DETAILS:** Page .



ADVOCACY 40%
RESEARCH 40%
EDUCATION 10%
COMMUNICATION 10%

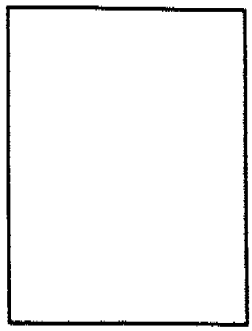
CHAIRMAN: Glenn Jones, Eastman Chemical Company. **CHARTERED:** 1980. **TASK GROUPS:** Toxicology Research, Process Safety, Clean Air. **PANEL MANAGER:** Kathryn Rosica. **MISSION:** Develop a data base, provide information, and promote sound regulatory action. **GREATEST ACCOMPLISHMENT:** Successfully advocated industry positions to federal, state and international bodies for more than 12 years. **LATEST ACCOMPLISHMENT:** Took opportunity to present over $1.8 million in Panel funded state-of-the-art research to an international audience of government regulators and researchers. **MOST PRESSING ISSUE:** Addressing continuous confusion among individual members of the category and regulations that do not appropriately differentiate



ADVOCACY 20%
RESEARCH 75%
EDUCATION 5%

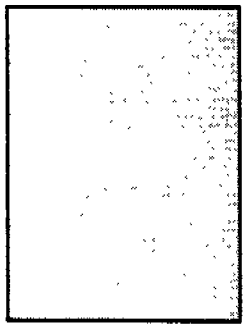
CHAIRMAN: Ray Papciak, Texaco Chemical Company. **CHARTERED:** 1982. **TASK GROUP:** Toxicology Research. **PANEL MANAGER:** Robert Romano. **MISSION:** To address regulatory and scientific activities in an effort to help agencies make sound decisions on ethylene oxide. **GREATEST ACCOMPLISHMENT:** The EOIC has established directly or indirectly a tremendous data base on ethylene oxide from toxicology, epidemidogy, and industrial hygine to engineering safety which allows for a more complete risk assessment on ethyene oxide. **LATEST ACCOMPLISHMENT:** Participated in an IARC review and evaluated a mutagenicity risk assessment on ethylene oxide. **MOST PRESSING ISSUES:** Work with EPA, academia and others on evaluating the carcinogenicity risk assessment on ethylene oxide and track the EO propagation study. **DETAILS:** Page .

ADVOCACY 100%

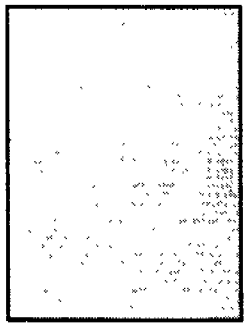


CHAIRMAN: Donald Lamb, Miles Inc. **CHARTERED:** 1988. **TASK GROUP:** Toxicology Research. **PANEL MANAGER:** Kathleen Roberts. **MISSION:** To address TSCA Section 4 issues for HDI. **GREATEST ACCOMPLISHMENT:** Advocated that TSCA testing should be conducted via inhalation route, as it is the most relevant exposure possibility. **LATEST ACCOMPLISHMENT:** Responded to the inclusion of HDI on EPA's proposed Toxics Release Inventory expansion list. **MOST PRESSING ISSUE:** To proceed with the required TSCA Section 4 testing program when EPA issues final rule. **DETAILS:** Page .

RESEARCH 100%

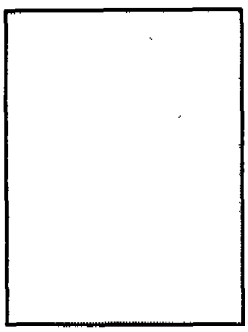


CHAIRMAN: Sharron Laas, DuPont. **CHARTERED:** 1987. **TASK GROUPS:** Specific Chemical Producers, Specific Chemicals Toxicology. **PANEL MANAGER:** Kathleen Roberts. **MISSION:** To address TSCA Section 4 issues on fluoroalkenes. **GREATEST ACCOMPLISHMENT:** Completed requirements for TSCA Section 4 test rule in 1992. **LATEST ACCOMPLISHMENT:** Same. **MOST PRESSING ISSUE:** To respond to any issues regarding the results of the TSCA testing program. **DETAILS:** Page .



ADVOCACY 75%
RESEARCH 25%

CHAIRMAN: Sherry Duff, Olin Corporation. **CHARTERED:** 1991. **TASK GROUP:** Toxicology Research. **PANEL MANAGER:** Dee Kuhn. **MISSION:** To support hydrazine related product stewardship activities. **GREATEST ACCOMPLISHMENT:** Continued efforts to provide the ACGIH with toxicity information to aid in its evaluation of the TLV for hydrazine. **LATEST ACCOMPLISHMENT:** Same. **MOST PRESSING ISSUE:** Monitor regulatory response to outstanding comments and petitions. **DETAILS:** Page .

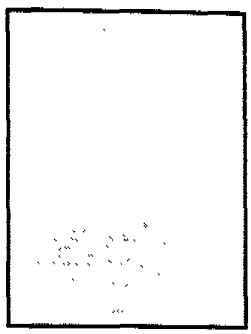


ADVOCACY 90%
RESEARCH 5%
COMMUNICATION 5%

CO-CHAIRMEN: Vergil Perry and Jonathon Ramlow, The Dow Chemical Company. **CHARTERED:** 1971. **TASK GROUPS:** Vinyl Chloride Research Coordinator Group, Vinyl Chloride Transportation Network (VCNet). **PANEL MANAGER:** Has Shah. **MISSION:** To assess health and safety data on vinyl chloride and to develop a mutual aid network for response to vinyl chloride incidents. **GREATEST ACCOMPLISHMENT:** Formation of VCNet to respond to vinyl chloride incidents, ensuring safety and effective response. **LATEST ACCOMPLISHMENT:** Investigating a physiologically based pharmacokinetic model for vinyl chloride risk assessment. **MOST PRESSING ISSUES:** To work with EPA on the risk assessment of vinyl chloride. **DETAILS:** Page .

[redacted]

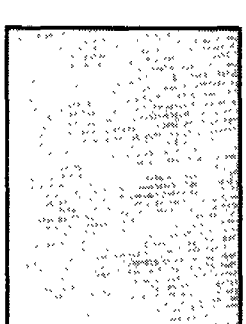
ADVOCACY 25%
RESEARCH 70%
EDUCATION 5%



CHAIRMAN: Randy Deskin, American Cyanamid Company. **CHARTERED:** 1985. **TASK GROUP:** Specific Chemicals. **PANEL MANAGER:** Robert Romano. **MISSION:** Address regulations and gather, review, generate and dissemenate information on direct and indirect potable water additives. **GREATEST ACCOMPLISHMENT:** Achieved National Sanitation Foundation acceptance of water additives certification packages for several chemicals. **LATEST ACCOMPLISHMENT:** Worked with NSF to allow the certification process on three chemistries to be smooth, cost/effective and quick. **MOST PRESSING ISSUES:** Assure the NSF certification process is running smoothly and cost/effective for three water additive chemistries and that all company member products are NSF certified as soon as possible. **DETAILS:** Page .

[redacted]

ADVOCACY 100%



CHAIRMAN: James Barter, PPG Industries, Inc. **CHARTERED:** 1974. **TASK GROUP:** None. **PANEL MANAGER:** Kathleen Roberts. **MISSION:** To sponsor research on the potential toxicologic effects and pharmacokinetics of VDC. **GREATEST ACCOMPLISHMENT:** Tracked the California Air Resources Board Compound Review of VDC. **LATEST ACCOMPLISHMENT:** Same. **MOST PRESSING ISSUE:** To respond to potential regulations affecting VDC. **DETAILS:** Page .

Completed toxicology research program.

Acetone

MISSION: The Acetone Task Group formed under the Ketones Panel in 1990 to address regulatory concerns of manufacturers, processors, and users. Task Group members decided to form a separate Panel because of the complexity and diversity of acetone issues.

ACCOMPLISHMENTS: By submitting information on toxicity and environmental concentrations, the Acetone Panel successfully advocated the removal of acetone from the Arizona Department of Environmental Quality's proposed list of hazardous air pollutants. After the Panel presentation at an ACGIH Committee Meeting in March 1993, and at the specific request of ACGIH members, the Panel developed a review of available human data on acetone. The Panel report, "The Local and Systemic Health Effects of Acetone," was provided to ACGIH Committee members for consideration in the acetone threshold limit value review. The Acetone Panel also submitted a petition requesting EPA to reclassify acetone as a volatile organic compound of negligible reactivity. In conjunction with that petition, the Panel provided EPA with acetone reactivity data developed by Dr. William Carter of the University of California at Riverside. Throughout the year, the group continued its communication with the EPA IRIS Work Group on establishing a reference dose for acetone, and with the National Sanitation Foundation on its accreditation of acetone as a potable water solvent.

PLANS: The Panel will proceed with the scheduled-controlled operant behavior (SCOB) neurotoxicity testing program, which was agreed upon during the settlement negotiations in January, and will be outlined in a final consent order in the fall. In addition, the Acetone Panel will continue its communications with ACGIH regarding the acetone TLV review process. The Acetone Toxicology Research Task Group will develop a dossier for Phase 4 of the OECD SIDS program and address misinformation included in some publicly available databases.

Alkanolamines

MISSION: The Panel formed initially to address toxicology issues associated with alkanolamines. Current Panel efforts are focused on voluntary research, publishing data, and regulatory advocacy.

ACCOMPLISHMENTS: The Panel completed a number of studies on monoethanolamine and diethanolamine under its voluntary research program. Completed research includes an *in vitro* dermal absorption study and studies on developmental toxicity in both rats and rabbits. Voluntary research in progress includes a pharmacokinetic study of DEA.

The Panel initiated a literature review covering the use, chemical and physical properties, toxicology, and pharmacokinetics of alkanolamines. Once completed, the literature review will be published. Efforts also were initiated by the Panel to publish results of its voluntary research program.

In 1993, EPA issued a proposed rule that would establish an RQ of 100 pounds for DEA. The Panel submitted comments to EPA indicating that the Agency incorrectly calculated the RQ, and that available scientific data support an RQ of 5,000 pounds. The Panel expects a response from EPA on the RQ issue in late 1994.

PLANS: The Panel plans to: continue voluntary research activities; submit completed research studies to the National Toxicology Program; publish research results in various peer-reviewed journals; publish a literature review of alkanolamines; develop a scientific position statement on the health effects of alkanolamines; continue advocating an increase in the RQ of DEA; and, monitor and respond to new regulatory developments.

Alkylphenols and Ethoxylates

MISSION: The Panel formed to determine the health and environmental effects of alkylphenols and ethoxylates in manufacture and use. Initial efforts focused on responding to EPA concerns about the chemical fate and environmental effects of nonylphenol. The Panel maintains liaison with the Soap and Detergent Association on scientific and regulatory issues.

ACCOMPLISHMENTS: The Panel completed all testing under TSCA Section 4 for nonylphenol. In April, the Panel participated in an OECD-sponsored Risk Reduction Workshop hosted by the Swedish EPA. The Panel held a facilitated planning session in which communication and research needs were identified as further priorities. The Panel continued to work with the state of North Carolina and the Wisconsin Department of National Resources on alkylphenols and ethoxylates on water treatability issues.

PLANS: The Panel will continue to educate the U.S. regulatory community on the results of Panel research. A risk assessment of APEs will be performed by the Panel by early 1994. The Panel also will continue to work with the Swedish EPA and agencies of other conducted countries. Biodegradation and treatability studies will be investigated by the Panel to assist North Carolina and other states in assessing potential risks of these chemicals to the environment. The Panel will continue to identify research and communication needs. In addition, the Panel will develop an information package on APEs for distribution at three upcoming workshops.

American Plastics

MISSION: The Council is to develop technically and economically sound programs for the responsible use, recovery and conservation of plastics and their component raw materials that address public interests and concerns.

CMA 054547

Among the goals for the APC, the following stand out:

To develop environmentally, economically, and technically proven programs based on sound integrated solid waste management principles including:

- o reusability
- o source reduction
- o mechanical & feedstock recycling
- o energy recovery
- o landfilling (when no better alternative exists)

To gain public acceptance for long-term integrated solutions that serve the public and the industry.

To meet these goals, 25 of the nation's leading plastics resin producers and representatives of the broader plastics processor community have come together through a joint initiative with the Society of the Plastics Industry, Inc. The purpose is to encourage efficient resource conservation throughout the life-cycle of plastics products. Council members have made a substantial commitment and pledged significant resources to achieve this goal.

Top executives including chief executive officers, presidents and senior executives have joined forces in this effort because industry believes it has the responsibility not only to respond to public needs with its products but also to respond to public values through its actions.

The APC has an integrated organization, directed by the APC Board of Directors, focusing efforts on Product Stewardship, Outreach, Advocacy and Industry Mobilization to provide industry-wide solutions to integrated resource management issues.

The Product Stewardship Task Force's function is to research and encourage economically sound integrated resource management technologies and implement these solutions in a timely manner. Some of those efforts include: continuing to develop technology to determine the optimum level for mechanical recycling of plastics; furthering the development of advanced technology recycling; conducting life-cycle analyses of plastic products; and, compiling and/or developing energy recovery information.

The Outreach Task Force dialogues with the public, policy makers, educators and other target audiences to convey the resource management benefits that demonstrate the positive role of plastics in society and the environment. This communication will help build public support for industry-sponsored solutions and position plastics as an efficient use of natural resources.

The Advocacy Task Force works with legislators and regulators to ensure an appropriate government role in providing responsible integrated resource management programs. The Task Force will focus on local, state and federal government officials to broaden the current public policy debate to include effective solutions such as recycling, advanced recycling and energy recovery.

The Plastics Mobilization Committee develops a core group of motivated downstream industry representatives committed to speak as a credible voice on critical resource management public policy issues. The Committee targets key local management personnel with a concerned community viewpoint and focuses their efforts at the local, state and federal levels.

Aryl Phosphates

MISSION: Before coming to CMA, the manufacturers were part of an *ad hoc* committee which formed to respond to inclusion of the chemical category in the Second Report of the Interagency Testing Committee in 1978. When EPA announced its intention to initiate rulemaking under TSCA Section 4, the members disbanded the Committee and reformed as a CHEMSTAR Panel.

ACCOMPLISHMENTS: In March 1993, EPA provided the Panel with a draft enforceable consent agreement for the aryl phosphate TSCA Section 4 test program. In many significant areas, the Agency's draft agreement coincided with the Panel's September 1992 proposed testing program, which was submitted under EPA's open season initiative.

PLANS: The Panel will initiate the consent order negotiations with EPA soon. ~~Other~~ Panel activities include sponsoring the negotiated testing program and responding to other regulatory concerns. Additional

Atmospheric Research

MISSION: The Council formed to address issues concerning the impact of chemical industry emissions on regional and global atmospheric change. Activities include: identifying and resolving scientific uncertainties about effects of increased concentrations of chemicals in the atmosphere; obtaining research data that will assist in developing chemical industry positions on such issues as Clean Air Act implementation and global climate change; and, providing a scientific foundation for the industry's position in the debates on a global effort to control greenhouse gases.

ACCOMPLISHMENTS: The Council continued its research program to increase understanding of the impact of chemical emissions and volatile products on global climate change. The Council decided to become a major co-funder of a project to develop an assessment model for the chemical industry. As part of this project, a workshop was held in Cambridge, Massachusetts on three-dimensional chemical transport assessment modeling in September. The Council also contributed funding for: an international workshop by NIST on chemical kinetics; a project by the International Global Atmospheric Chemistry for the development of global emissions inventories; and, a project to update estimations of hydroxyl radical reaction rate constants.

The Panel has been following OSHA reform legislation with a focus on the provision which would reinstate the 1989 Air Contaminants Standard which was vacated by the court. The Panel has worked with a consortium of trade associates and convinced OSHA to support a modification to this provision which preserves settlement arguments arising from the law suit. Both the House and Senate bills currently contain the modified wording.

The Panel submitted comments opposing the listing of H_2S under EPCRA 313 and is currently working with American Petroleum Institute and the American Forest Products Association to convince EPA to withdraw H_2S from the final rule. The Panel commented on the EPA document "Principals of Neurotoxicity Risk Assessment." The Panel also commented on the proposed Universal Treatment Standard for CS_2 under RCRA land disposal restriction rules. The Panel met with EPA and provided data that show that the UTS for CS_2 is not feasible for the viscose process. Most recently, the Panel provided data to ACGIH as they begin development of a Threshold Limit Value for CS_2.

PLANS: The Panel will continue a dialogue with EPA and NTP on the testing of carbon disulfide and on the development of an appropriate reference concentration. The Panel will follow OSHA reform legislation closely, and ensure that the provisions of the settlement agreement are incorporated into any new legislation. Also, the Panel will continue to monitor EPA's activities in developing TSCA test rules on carbon disulfide. The Panel will continue its reanalysis of the NIOSH data to support both a TLV and reference concentration and present its findings to EPA and ACGIH.

Carrier Assessment

MISSION: The Council formed to address carrier assessment issues of concern to the CMA membership. A major goal of the Council is to help interested CMA members meet the carrier safety provisions (3.1 and 3.2) of the Distribution Code of Management Practices. These provisions require that CMA members: establish a process for qualifying carriers of all modes and types; evaluate carriers for safety fitness and regulatory compliance; and, provide feedback and suggestions for improvement to carriers on their safety performance. Activities to accomplish this goal include developing assessment protocols, promoting their use and working with the Distribution Committee to optimize assessment protocol value to chemical shippers and carriers.

ACCOMPLISHMENTS: The Council completed development of the Highway Carrier Assessment Protocol and completed pilot field testing of the final protocol. Assessment protocol development was initiated for rail, barge and container vessel modes. Active participation of the carriers is a hallmark of all protocol development work. Work on these three protocols is 90% completed as of May 31, 1994. The Highway Protocol was referred to the CMA Distribution Committee Implementation Work Group, and Council members are working to ensure a smooth transition from the development to the implementation phase. Final drafts of the remaining protocols are being utilized by the Distribution Committee to facilitate use planning.

PLANS: The Council will complete rail, barge and container vessel assessment protocols in July 1994.

Chemical Distributors

MISSION: The Council formed to address issues of concern to chemical distributor members of CMA. Council activities include: collecting, evaluating and disseminating information on issues that affect chemical distribution; and advocating the interests of the chemical distributor sector. The Council maintains a strong interaction with the National Association of Chemical Distributors through that Association's formal membership in the Council.

ACCOMPLISHMENTS: The Council worked to develop the Responsible Care® Product Stewardship Code Assessment Protocol for Distributors. Although primarily developed for use by distributors, the protocol can be been useful in assessing manufacturers' in-house distribution operations.

PLANS: The Council plans to focus on wider dissemination and use of the Chemical Distributors Self-assessment Protocol developed in 1992 and the new implementation aid for the Product Stewardship Code.

Chlorinated Pool Chemicals

MISSION: The Panel formed to promote safety practices worldwide in the processing, packaging, warehousing, transportation, and use of chlorinated pool chemicals. Panel members include producers of calcium hypochlorite and chlorinated isocyanurates worldwide.

ACCOMPLISHMENTS: The Panel submitted its research report on chloroform releases from swimming pools to the California Air Resources Board. The Transportation Task Group's bulletin on the transportation of calcium hypochlorite and chlorinated isocyanurates was finalized and prepared for publication. The Panel continued to research the "self-reactive" classification recommended by the U.N. Expert Committee on the Transport of Dangerous Goods and discussed the issue with the U.S. Department of Transportation.

PLANS: The Panel will continue to work with DOT on the classification of specific pool chemicals. The transportation bulletin soon will be available for distribution to shippers of pool chemicals and personnel responsible for in-transit storage. In addition, the Panel will continue distribution of its training videotapes for fire and emergency response personnel and guidelines for safe handling and storage of pool chemicals. The group will proceed with monitoring various fire and building code regulations and other requirements affecting chlorinated pool chemicals.

to the various regulatory agencies. Panel member companies are awaiting the outcome of EPA's evaluation of the data.

During the past year, the TSCA Interagency Testing Committee designated 2,4-DNT for dermal absorption testing. The Panel submitted technical comments to ITC advocating that dermal absorption testing of 2,4-DNT is unnecessary. The Panel is waiting for ITC's response.

PLANS: The Panel intends to interact with German and U.S. agencies as results of its voluntary testing are assessed. The Panel also plans to monitor ITC dermal absorption testing requirements. Future plans include publishing research results.

Ethylenebis(stearamide)

MISSION: Manufacturers of EBS formed the Panel to voluntarily collect, generate, and evaluate information required to complete a Screening Information Data Set (SIDS) dossier for evaluating environmental and health toxicity potentials of this chemical.

ACCOMPLISHMENTS: One of the sixty-two chemicals assigned to Phase 3 of the OECD High Production Volume Existing Chemicals Voluntary Testing Program is N,N'-1,2-ethanediylbisoctadecanamide, also known as N,N'-ethylenebis(stearamide) (EBS). The Panel has developed a SIDS dossier for EBS and has worked with EPA to ensure that all available data and data gaps are identified for consideration in the OECD process.

PLANS: Following notification of the recommendations agreed upon during the September 1993 Phase 3 OECD SIDS Review Meeting in Paris, the Panel will consider the recommendations concerning EBS and then take appropriate action.

Ethylene Dichloride (Completed)

MISSION: The Panel formed to address federal and state agencies in all safety and health issues arising from the production, distribution, and use of ethylene dichloride.

ACCOMPLISHMENTS: During its time as a CHEMSTAR group, the Panel evaluated scientific literature, identified data gaps, and, in an effort to improve the research data base, completed a voluntary testing program which included chronic inhalation, metabolism, and teratogenicity studies. The Panel also responded to regulatory issues affecting EDC from various federal and state agencies, such as ATSDR, EPA, OSHA, and California EPA.

WHO, IF ANYONE, IS ADDRESSING OTHER ISSUES: No other group has been identified which will address EDC issues.

Ethylene Glycol

MISSION: The Panel formed in 1986 to augment the ethylene glycol toxicological data base The Panel then completed a voluntary testing program, focusing on developmental toxicity and pharmacokinetics research in mice and rats.

ACCOMPLISHMENTS: As a result of the Ethylene Glycol Panel's advocacy efforts, EPA issued a proposed rulemaking in November 1993 to adjust the reportable quantity (RQ) for ethylene glycol from the statutory CERCLA default of one pound to 5,000 pounds, based on a review of EG toxicity and environmental data. In addition, the Panel was successful in correcting the classification of ethylene glycol in the proposed Section 112(g) rulemaking before that NPRM was published. The Panel also submitted extensive comments to the Agency for Toxic Substances and Disease Registry (ATSDR) on its technical report on ethylene and propylene glycol. The Toxicology Research Task Group completed two research projects, an in-vitro skin penetration study and a plasma metabolite identification study, and is in the midst of having several research projects published, including a perspective of ethylene glycol developmental toxicity.

PLANS: The Ethylene Glycol Toxicology Research Task Group will continue its investigation into the mechanism of EG developmental toxicity by conducting a whole embryo culture assay on EG and a study to determine the relationship between developmental toxicity effects and the onset of metabolic acidosis. The Panel will monitor the status of the RQ rulemaking within EPA and the final technical report from ATSDR. In addition, the Panel will provide input into ACGIH during its review process of ethylene glycol's TLV values. The Ethylene Glycol Panel will develop an appropriate strategy for disseminating available EG data to interested parties.

Ethylene Glycol Ethers

MISSION: The Panel formed to develop an adequate toxicity data base on ethylene-based glycol ethers, provide information to users and government agencies on the safety of the chemicals, and promote scientifically sound regulatory action.

ACCOMPLISHMENTS: Results of a number of year's worth of voluntary and required toxicology testing were highlighted this past year, with papers presented at an international symposium and a number of publications published or pending. A primary focus of the last year, the International Symposium on Health Hazards of Glycol Ethers, was cosponsored by the U.S., Netherlands, and France and held in Nancy, France in April, 1994. Four members of the Toxicology Research Task Group gave oral and written presentations on ethylene glycol butyl ther, diethylene glycol butyl ether and triethylene glycol ethers. The Panel also prepared informational packages describing their research and advocacy programs for members of the international audience. A number of papers given at the symposium will also be published in the peer-reviewed literature.

Completed research over the past year included further refinements to a physiologically-based pharmacokinetic model of EGBE and a unique human exposure protocol to assess the

nature of dermal uptake from vapors. The latter study responded to earlier reports that the skin could potentially be a much greater route of exposure than even general biological considerations would predict.

The Panel sponsored active involvement in an ECETOC Technical Committee developing an Indicative Limit Value for a European Union occupational standard on EGBE. A representative of the Panel's TRTG participated in meetings throughout the year and all of the Panel's sponsored research on EGBE was compiled for the effort. An ECETOC Special Report has been published and transmitted to the Scientific Expert Committee of the European Union.

The Panel worked with the U.S. Department of Transportation to submit a paper to the United Nations Committee on the Transport of Dangerous Goods. The paper proposes to change the current United Nations and DOT classification of ethylene glycol butyl ether from its current Packing Group III Poisonous Substance class to non-regulated. This precedent-setting paper utilizes acute toxicity data generated by the Panel in an alternative species, the guinea pig, as more relevant to human assessment. The UN Committee will meet in July, 1994 to take action on the proposal.

The Panel brought a second and final effort forward to see the defeat of a bill proposed by Senator Tom Hayden in California on glycol ethers. In it's evolution, the bill's provisions ranged from criminilazing the use of certain members of the class to directing Cal-OSHA to carry out redundant and needless reviews.

The Panel continues efforts to clarify and correct the inappropriate use of the term "glycol ethers" in articles and statements characterizing toxicology, use and exposure information on the more than 30 different commercial products included in the chemical category. These efforts includes letters to the editor and other responses to popular press, trade and scientific journals, and the mass media.

The Panel continues to seek avenues for relief from inappropriate regulatory actions as a result of being listed as a category of chemicals. Such regulations include those implementating provisions of the Clean Air Act and Reportable Quantities requirements under CERCLA. A petition to EPA on RQs is still pending Agency action.

PLANS: The Panel will continue a focus on international activities and pursue a coordianted industry program with the Ethylene Glycol Ethers Sector Group of CEFIC. They hope to have a third opportunity to meet with representatives of the Group this year and will also work to include members of an ad hoc Japanese consortium in the discussions. Voluntary research on EGBE will continue to be supported in the area of human risk assessment and species specific mechanisms of hemolysis.

Ethylene Oxide

MISSION: The Panel formed to evaluate the results of an animal study that may affect OSHA and EPA regulatory proceedings on ethylene oxide. The EOIC addresses many regulatory and scientific activities in an effort to provide agencies with enough information to make reasonable and scientifically sound decisions on regulatory controls.

ACCOMPLISHMENTS: The Ethylene Oxide Industry Council and Chemical Industry Institute of Toxicology continued cofunding a pharmacokinetics physiological modeling study being conducted at CIIT. The study results will be very helpful in looking at ethylene oxide risk assessment, specifically mutagenicity risk assessment. The EOIC continued working with the EPA on ethylene oxide risk assessment. The EOIC worked with IARC as they revisited ethylene oxide. The epidemiology studies of ethylene oxide do not agree with the results of the animal studies and recent EOIC sponsored meta-analysis further illustrates this point. This point was carried to IARC during their ethylene oxide review. The final Hazardous Organic NESHAPS was issued this past winter and the EOIC assessed how ethylene oxide may be effected. The EOIC is sponsoring an ethylene oxide flame propagation study in two and twelve inch lines. The EOIC Safety task group has had several information exchanges on ethylene oxide stewardship.

PLANS: The CIIT pharmacokinetics physiological modeling study will continue, into its fourth year. The Toxicology task group will review several ethylene oxide reproductive studies and evaluate ethylene oxide carcinogenicity risk assessment. The group will host with CIIT a joint planning meeting on mutagenicity risk assessment, this August with EPA representatives, industry toxicologists and academicians. A scientific paper on the CIIT research will be published this year. An international symposium cosponsored with CIIT and EPA on mutagenicity risk assessment is planned for 1995. The ethylene oxide flame propagation study will continue through 1994, with a final report due in January, 1995. "Information Exchange" workshops focusing on safety and handling of ethylene oxide and on toxicology issues are planned for 1995. The Environmental task group will summarize the final HON Standards as it effects ethylene oxide manufacturing and use. They will also evaluate ethylene oxide exposure for ultimate use in risk assessment. The Industrial Hygiene task group will publish an article on ethylene oxide protective clothing.trial Hygiene task group will publish an article on the results of our ethylene oxide protective clothing research.

Fluoroalkenes

MISSION: The manufacturers of fluoroalkene monomers originally formed an *ad hoc* coalition to address the Interagency Testing Committee's 1980 designation of fluoroalkenes for priority consideration under TSCA Section 4. The coalition reorganized as a CHEMSTAR panel when EPA issued the final test rule.

ACCOMPLISHMENTS: In July 1992, the Panel completed the requirements for its TSCA Section 4 test rule, which included mutagenicity, subchronic toxicity, and oncogenicity on four fluoroalkene monomers — vinyl fluoride, vinylidene fluoride, hexafluoropropene, and tetrafluoroethene.

PLANS: The Panel will respond to any issues regarding the results of its TSCA testing program, as well as monitor other regulatory issues on fluoroalkenes.

Hexamethylene Diisocyanate

MISSION: The Panel formed to address the inclusion of HDI on the Interagency Testing Committee priority list of chemicals for testing under TSCA Section 4.

ACCOMPLISHMENTS: The Panel continues to wait for EPA to issue the final TSCA Section 4 test rule on HDI. In the meantime, the group commented on EPA's proposed rulemaking to adjust the reportable quantity for HDI from a statutory one-pound limit to 100 pounds. In addition, the Panel responded to the inclusion of HDI on EPA's proposed Toxics Release Inventory expansion list.

PLANS: The Panel will proceed with the required testing program when EPA issues the final rule. In addition, the Panel intends to contact DOT regarding HDI classification under Hazardous Material Transportation Rule 181. The group will continue to track other regulatory issues affecting HDI.

Hydrazine

MISSION: The Panel formed to support hydrazine-related product stewardship activities. Panel members have reviewed and evaluated published and unpublished literature on the health effects of hydrazine in order to maintain a current, accurate point of reference for discussion of the safe use of hydrazine products.

ACCOMPLISHMENTS: The Panel submitted comments to ACGIH on the proposal to lower the Threshold Limit Value for hydrazine from 0.1 ppm to 0.01 ppm. In response, ACGIH has postponed the decision for another year so that the TLV Committee may further consider research results. The Panel cooperated with the EPA in its Risk Management Review of hydrazine through meetings and submission of other pertinent information. The Panel also and submitted a petition to the EPA for reconsideration of the weighting factor for hydrazine under the Early Reduction Rule. The Panel submitted analytical methods for analyzing hydrazine in water and soil to the EPA for consideration in the drafting of a proposed hazardous waste identification rule under RCRA, and supported a petition for a new classification of hydrazine by DOT for "less than 37% hydrazine".

PLANS: The Panel will continue its product stewardship activities, and will work with regulatory agencies and other concerned organizations ion matters relating to health and safety aspects of hydrazine.

Hydrogen Fluoride

MISSION: The Panel formed to provide a forum for U.S. and Mexican producers and shippers to share information on safety in the manufacture, handling and transportation of, and emergency response procedures for anhydrous hydrogen fluoride and hydrofluoric acid.

ACCOMPLISHMENTS: The Panel expanded to include users and suppliers of raw materials as members and broadened its focus to include advocacy activities. The Management Group and Advocacy/Communications Task Group led the Panel's participation in EPA's Congressionally-mandated program to prepare a study of the industry. The Panel also submitted to EPA an independent study of transportation incidents involving anhydrous HF. The Panel commented extensively on ATSDR's Draft Toxicology Profile on HF. Members of the Medical & Toxicology Task Group also worked with the CMA Health and Safety Committee to develop comments on ATSDR's draft protocols for emergency medical treatment of HF exposure victims.

PLANS: The Panel will track a lawsuit filed against the California South Coast Air Quality Management District that banned specific uses of HF. The technical task groups will work toward completion of their recommended guidelines for industry safety practices. The Panel will continue to host the Annual Meeting and Safety Seminar.

Hydroquinone

MISSION: The Panel formed in response to a TSCA Section 4 test rule published by EPA in 1984. The current focus of the Panel is voluntary research.

ACCOMPLISHMENTS: In 1990, the Panel completed a TSCA Section 4 testing program for hydroquinone. All required data and reports have been submitted to EPA, and the Panel has prepared a Research Summary Report outlining the findings and conclusions of the various studies. Completed TSCA Section 4 studies include evaluations of developmental toxicity, reproductive toxicity, subchronic neurotoxicity, and pharmacokinetics.

During the past year, the Panel initiated a voluntary research program to further evaluate the health effects of hydroquinone. Voluntary research currently in progress includes PBPK modeling and studies on epidemiology, protein binding dosimetry, oxidative stress in the kidney, comparative enzymology, and *in vitro* metabolism.

To disseminate results of its research program, the Panel has published a number of abstracts and scientific articles, and has given poster presentations at various scientific conferences. The Panel also has provided various trade groups, including the Nonprescription Drug Manufacturers Association, the Cosmetic Ingredient Review, and the Cosmetic, Toiletry, and Fragrance Association, with summaries and final reports of its studies.

the concerns raised by the Panel were not only important for the vinyl chloride epidemiology study but also for occupational epidemiologic studies in general.

In May, The Panel invited Dr. Richard Reitz, a consultant, to present a seminar on predicting cancer risk from vinyl chloride exposure with a physiologically-based pharmacokinetic (PB-PK) model. The risk assessment based on the PB-PK model predicted considerably fewer risks than would be calculated by non-pharmacokinetic procedures. The Panel plans to meet with EPA to discuss the risk assessment of vinyl chloride using PB-PK and multistage modeling before the Agency develops a risk number for vinyl chloride in the Integrated Risk Information System database.

Vinyl Chloride Transportation

MISSION: The Panel was formed in 1971 by vinyl chloride manufacturers to develop and assess health and safety data on vinyl chloride monomer. The Panel expanded its scope of activities in 1991 to address safety issues in the transportation of vinyl chloride monomer. In 1992, the Panel formed the Vinyl Chloride Transportation Network to provide technical expertise and assistance by the industry and contractors to emergency responders at vinyl chloride railroad transportation incidents. Shippers of vinyl chloride are able to activate the network through CHEMTREC, CMA's hazardous materials hotline. VCNet is the first mutual-aid network to be formed under CHEMSTAR.

ACCOMPLISHMENTS: In September, VCNet updated an Emergency Response Operation Manual to facilitate the operation of the mutual aid network among CHEMTREC, vinyl chloride manufacturers and users, "for-hire" contractors, and railPractices.

Also in December, CHEMTREC conducted a VCNet emergency response drill to test the operation of VCNet. The drill demonstrated that VCNet can be successfully activated in case of an emergency involving vinyl chloride.

Panel members, on a periodic basis, shared non-proprietary safe-handling and distribution incident information on vinyl chloride to promote safety and to protect environmental quality during manufacturing and distribution.

PLANS: VCNet will identify additional "for-hire" contractors to provide emergency response services when the shipper cannot be contacted by CHEMTREC or when the shipper cannot reach the incident site quickly. VCNet will continue to conduct periodic mock emergency response exercises to ensure that CHEMTREC, "for-hire" contractor response teams, and company response teams are aligned and can act quickly in case of an emergency. The Panel will work with CMA's Interindustry Rail Group to recommend to the American Railroad Association that future vinyl chloride railcars be constructed in a manner that would make them adaptable to a capping kit. The Panel will continue its technical support for the Vinyl Chloride Safety Awareness Training Workshops to be held throughout the U.S. The Panel will prepare a media communication brochure for VCNet and a video on the safe handling of vinyl chloride.

Vinylidene Chloride

MISSION: The Panel formed to sponsor research on the potential toxicologic effects and pharmacokinetics of VDC. The objective was to develop data for ensuring the safety of workers involved in the manufacture, handling, and use of the chemical, as well as the safety of communities surrounding production facilities.

ACCOMPLISHMENTS: The Panel tracked the California Air Resources Board Compound Review for VDC, contained in CARB's Assessment of Indoor Concentrations, Indoor Sources, and Source Emissions of Selected Volatile Organic Compounds. CARB did not include VDC in its recommendation for further research.

PLANS: The Panel will continue to respond to potential regulations affecting vinylidene chloride.

Water Additives

MISSION: The Panel formed to address regulations of direct and indirect potable water additives. The objectives are to monitor regulatory policies, improve communication, review toxicology data, develop advocacy positions, ensure that any water additives program is designed and administered in a cost-effective manner, and ensure that water additives are used in a manner that does not compromise public health, safety, or the environment.

ACCOMPLISHMENTS: The Panel continued to work with the National Sanitation Foundation (NSF) in an effort to have NSF accept the water additives certification packages for the following chemicals: polydiallyldimethylammonium chloride (PDADMAC), copolymers of epichlorohydrin and dimethylamine (EPI/DMA), and polyacrylamide (PAM). The Spring of 1994, after several meetings with NSF and addressing many issues, the certification packages were finally accepted. Two companies have now used these certification packages along with their own company application to receive NSF certification for one water additive. Other Panel member companies are also seeking this certification. Eventually all Panel members will have their own water additives certified by NSF and the accepted certification packages will be used to benefit each Panel member. The data in the certification packages is confidential and is to be used only for the certifications of Panel members. The data is compensable and can be purchased by non-Panel members.

PLANS: The Panel and Panel members will continue to work with NSF to receive water additives certification for all three chemistries. At their Spring 1994 Planning Meeting, the Panel identified a value in continuing the Panel after NSF certification. The Panel will continue to monitor water additive regu-